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POINTS, PRICES AND CONSUMERS' CHOICE

When a woman went shopping in peace-time she came home with a basket-full of goods whose marginal rates of substitution were proportional to their prices. Should she feel the slight dizziness which is the symptom of 'disequilibrium', it was not difficult to effect a cure by a slight alteration in her subsequent purchases. The introduction of 'point' rationing, where 'point' values are not proportional to prices, has brought a new problem into the domestic economy. For now the average housewife has not only to make the best of her money, but also of her points. That there exists a position of maximum satisfaction, or, more correctly, a preferred position in the point-money economy is witnessed by the sober behaviour of shoppers. But although the instinct of the rational housewife has brought her to this position, and a serious epidemic of 'disequilibrium' need not be feared, it is of some interest to try to discover her secret.

1. Consider first two commodities X and Y, whose prices per unit are respectively a and b shillings, and for which r and s points respectively must be surrendered. Suppose in addition that the consumer spends on these two commodities m shillings and p points in the given period. The consumer can buy either $\frac{m}{a}$ of X and no Y, or $\frac{m}{b}$ of Y and no X.

The equation of the *price line* is therefore $ax + by = m$.
The equation of the equivalent *point line* is $rx + sy = p$.

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The *price* line and *point* line will intersect in a point P whose co-ordinates are:

$$x = \frac{ms - pb}{as - rb} \qquad y = \frac{pa - mr}{as - rb}$$

Suppose that the slope of the price line is steeper than that of the point line, i.e. X is *relatively* more expensive in terms of money than in points.[1] Then $as - rb$ will be positive. The condition that both x and y, the coordinates of P, should be positive are:

$$\text{for } x: \quad \frac{m}{p} > \frac{b}{s}$$

$$\text{for } y: \quad \frac{m}{p} < \frac{a}{r}$$

Now $\frac{m}{p}$ is the ratio of the *total* money outlay to the *total* 'point' outlay, while $\frac{b}{s}$ and $\frac{a}{r}$ are the ratios of the prices to the 'point' values of the two commodities Y and X. Thus for both co-ordinates of P to be positive the ratio of total money outlay to total points must lie between the ratios of price to point values of the two commodities. The condition is:

$$\frac{a}{r} > \frac{m}{p} > \frac{b}{s}$$

If this condition is not satisfied then one, and only one, of the coordinates of P will be negative.[2] This would mean that there is, in fact, no way in which the consumer could spend *all* his money and *all* his points. He could spend all of one and still must have a surplus of the other.

THE 'PREFERRED POSITION' OF THE CONSUMER

In Figs. 1 and 2 we illustrate the case where $\frac{a}{r} > \frac{m}{p} > \frac{b}{s}$. MM' RR' are respectively the *price line* and equivalent *point line*, intersecting in P. The curved line represents the indifference curve passing through P.

(*i*) Suppose the indifference curve through P lies in the angle MPR, i.e. the marginal rate of substitution at P lies between the ratio of prices and the ratio of point values. In this case, given that the consumer is willing to spend his full money outlay m, and/or all his points p, P will be his preferred position. For although there are higher indifference curves which he could 'afford' either in terms of money or of points, there is none on which he can afford both simultaneously. (Fig. 1.)

(*ii*) Suppose now that the marginal rate of substitution at P is greater than both the ratio of prices and of point values of the commodities. The slope of the indifference curve through *P* will now be steeper than that of both *MM'* and *RR'* (Figure 2, dotted lines).

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[1] We can always draw our diagrams in such a way that this will be the case. This condition is equivalent to the condition that the ratio of the price of a unit of X to its point value should exceed the corresponding ratio for Y.

[2] Since, if $\frac{m}{p} > \frac{a}{r}$ it must also be $> \frac{b}{s}$; and similarly if $\frac{m}{p} < \frac{b}{s}$. We exclude throughout the case where the point and price ratios are the same.

In this case *P*, although it denotes the only position where the consumer can spend all his money and all his points, will not be the optimum position. The latter will be the point *T* where an indifference curve touches the price line *MM'*. In this case the consumer will spend all his money and still have points to spare. The opposite would be the case if the marginal rate of substitution at *P* were *less* than the ratio of both prices and points (Figure 2). The optimum position would now be *S*, where an indifference curve touches the point line, and this time the consumer, after spending all his points, would still not spend all the cash he was willing to do.

2. The conclusions arrived at above can be used to illustrate for two commodities the practical case where the total number of 'points' is fixed but the money outlay is variable. In Figure 3 *RR'* is the point line; that is to say, if all points are spent on *X* quantity *OR'* is obtainable, and if all are spent on *Y* quantity *OR* is obtained. M_1M_1' is the first position of the price line. Clearly in this case all the points cannot be spent and so the consumer will lay out his money without regard to points and choose position T_1. Now as the consumer's money outlay rises the price line will move upwards (remaining, of course, parallel to M_1M_1'). The point of tangency *T* will trace out the 'income-consumption' curve. Let this curve intersect the point line *RR'* at T_2. The price line through T_2, M_2M_2', will of course touch the indifference curve through T_2. With a money outlay which will buy either OM_2' of *X* or OM_2 of *Y*, the consumer will in fact choose the combination represented by T_2 and will also *just* spend all his points.

If there were no rationing a further increase in money outlay would simply lead to an extension of the 'income-consumption' curve (T_2T_3). But the 'points' impose their own limit to the way in which the consumer can lay out his money. The income-expenditure curve in fact takes a sharp turn at T_2 and runs along the point line *RR'*. It will continue as far as the point *Q*, where an indifference curve touches the point line. However much money the consumer has, he cannot go beyond the point *Q*. That the 'income-consumption' curve does in fact run along *RR'* from T_2 to *Q* is easily shown. At T_2 the marginal rate of substitution is equal to the ratio of *prices*, at *Q* it is equal to that of *points*. Between T_2 and *Q* the marginal rate of substitution lies between the price-ratio and the point ratio. It follows from case (*i*) in the previous section that the preferred position lies on the point line.[1]

It follows from the above argument that for some consumers point rationing (where the point values are not proportional to prices) causes a loss of satisfaction. The extreme case is where the consumer is at *Q*, when his money alone would indicate the point T_3; for *Q*, involving the same outlay of money, is on a lower indifference curve than T_3. There is a loss for all consumers whose consumption lies on the T_2Q part of the 'income-consumption' curve, increasing from T_2 to *Q*. It would appear that the loss is greater, the greater the difference between the

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[1] It should perhaps be stressed that at no point along T_2Q is an indifference curve tangential either to the price line or the point line.

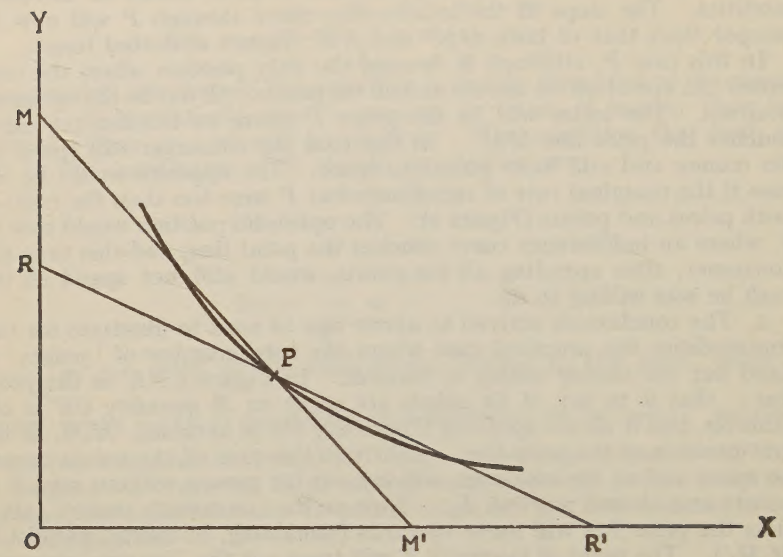

FIGURE I

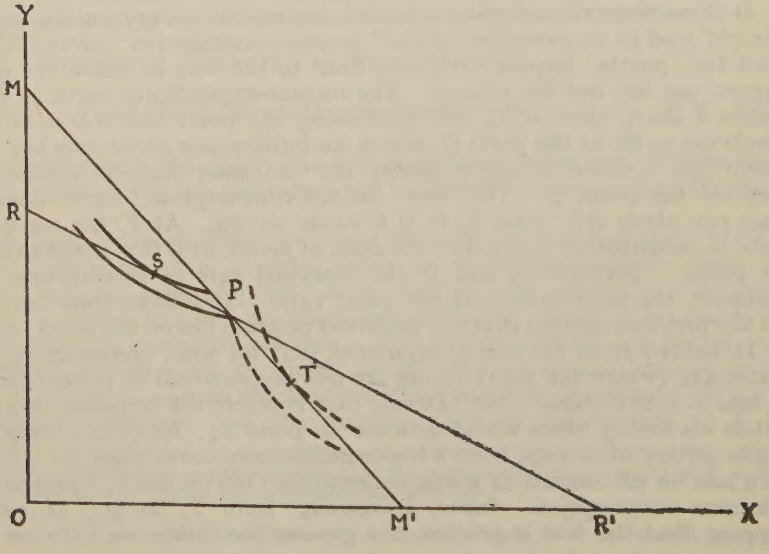

FIGURE 2

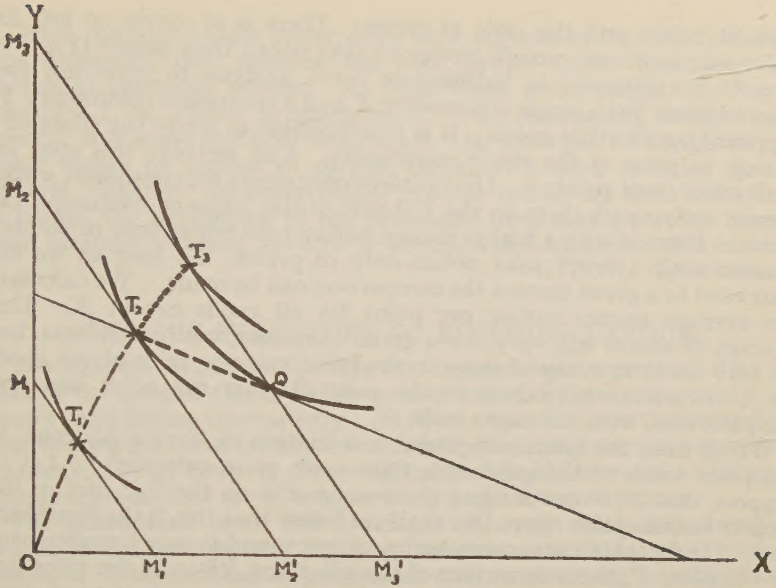

FIGURE 3

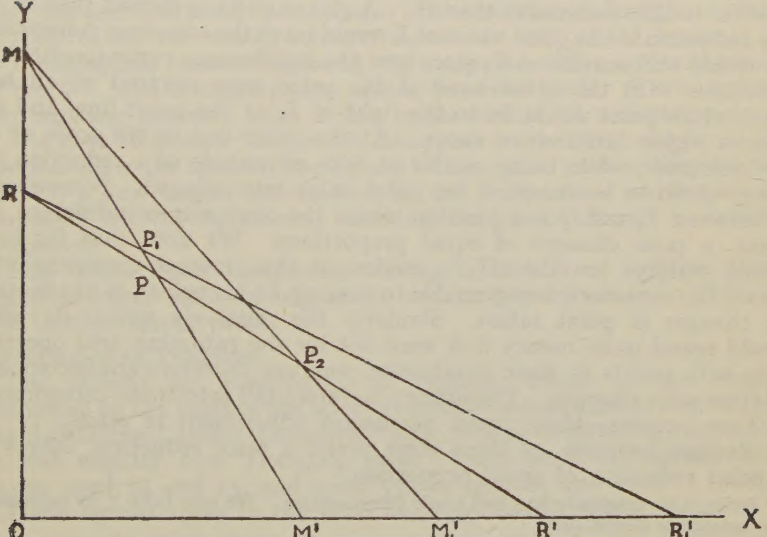

FIGURE 4

ratio of points and the ratio of prices. There is of course no loss for those who have not enough money to take up all their points (T_1).

3. It is customary in indifference curve analysis to take, not two commodities, but a single commodity X and a composite commodity Y, representing all other goods ; it is then possible to study the effect of a change in price of the single commodity. Can we take this step for both money *and* points ? The problem only exists for consumers whose money outlay puts them on the T_2Q part of the ' income-consumption ' curve. Persons with a higher money outlay take notice only of points : persons with a lower take notice only of prices. So long as we are restricted to a given income the comparison can be made. We calculate the average money outlay per point for all goods except X. This average of course will vary, for a given consumer, with his income, but we may use it to study changes in the point value or price of one good, for it will enable us to draw on the *same* diagram the point line and the price line, with the same scale.

Which does the consumer prefer, a reduction of, say, 1 per cent. in the point value of the good or a 1 per cent. price reduction ? Let us suppose that in terms of fig. 3 the consumer is on the T_2Q part of the income-consumption curve (we shall see below that this is the significant case). In fig. 4 the consumer's outlay of points and money is represented by the point P, the intersection of the point line RR' and the price line MM'. RR_1' is the new point line corresponding to a reduction of 1 per cent. in the point value of X ; MM_1' is the new price line which shows the corresponding 1 per cent price reduction of X (as defined above). In the first case the new equilibrium position is P_1, in the second P_2. The preference of the consumer depends upon whether P_2 is on a higher or lower indifference curve than P_1. A glance at fig. 3 shows[1] that at T_2 any reduction in the point value of X would leave the consumer unmoved. He would still remain at T_2 since here the indifference curve touches his *price* line. On the other hand if the price were reduced at all his equilibrium point would be to the right of T_2 on the point line, and so upon a higher indifference curve. At the other end of the scale at Q the consumer, while being unable to take advantage of a reduction in price, would be better off if the point value was reduced. Somewhere in between T_2 and Q is a position where the consumer is indifferent to point or price changes of equal proportions. We note that for low money outlays (on the OT_1T_2 section of the ' income-consumption ' curve) the consumer, being unable to take up all his points, is unaffected by changes in point ratios. Similarly the relatively well-to-do who would spend more money if it were not for the rationing, will operate only with points in their purchasing, and are therefore unaffected by relative price changes. Consumers therefore fall into three categories :

1. Low incomes—these prefer downward adjustment in prices.
2. Medium incomes—of these some prefer a price reduction, others a point reduction of equal proportion.[2]

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[1] In fig. 3 we originally had two single commodities. We now take Y to represent the composite commodity.

[2] The comparison of equi-proportional price and point changes is, of course, arbitrary. Other criteria of comparision could be taken. But whatever the criterion, the same conclusion would be reached, that of the ' medium income ' group, some consumers would be more sensitive to prices, others to points.

3. High incomes—these prefer downward adjustment in point values. The categories, low, medium and high, are of course related to the particular rationing scheme. In some cases most people may be in category 1, in others in category 3. The conclusion, though very general, is of some practical importance ; for example, if the Ministry of Food wishes to dispose of surplus stocks of a food included in the 'points' scheme. If many people are not taking up their full quota of points, the depointing of the particular item may prove an insufficient measure and may have to be accompanied by a reduction in price.

G. D. N. Worswick.

THE AGE STRUCTURE OF BUILDING LABOUR.

The various factors responsible for higher labour costs and thus for part of the general rise in building costs fall into three categories : (*a*) causes valid during the war only ; (*b*) those extending into the immediate post-war period ; and (*c*) those which will remain in a normal peace-time economy. It is, however, often difficult to decide how far a change is temporary and how far of a more basic and lasting character.

The guaranteed week and holidays with pay, both introduced in course of the war by the building industry, are to-day accepted as measures to be retained in peace-time and as necessary to attract new entrants into the building industry. As long as building labour is scarce, that is, during the war and for many years after, these improvements will probably be maintained. But unemployment in the building industry was always very high and moved continuously above the national average. In the three months preceding the outbreak of war, the unemployment percentages in the building industry amounted, in spite of the favourable summer season, to 11% of the insured,[1] and in Building and Contracting to 15.7% compared with a national average of 8.9%.[1] The unemployment among juveniles under 16 was higher in the building industry than in any other industrial occupation.

The cost of *transfer labour* will disappear in the same degree as new trainees enter the trade in those parts of the country where they are most needed, a flow largely determined by the prospects of continuous employment and by favourable working conditions offered to building operatives.

This inflow again determines the age structure of building labour which exercises such an important and lasting influence on efficiency and thus on labour costs.

The Pre-War Position

The present age composition of building labour can be roughly estimated on the basis of the latest available Census, that is that of 1931. Total Building Labour (exclusive Public Works Contracting) aged 16—64 was slightly over 1,000,000 men. There were in addition some 20,000 aged 14 and 15, and some 55,000 aged 65 and over.

These figures apply to the total building labour force inclusive of semi-skilled and unskilled labour. Craftsmen who repersent some 48%[1] of total building labour show an age structure similar to the total. But if we, split up the craftsmen according to individual crafts, marked differences become apparent.

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[1] Unemployment among building *craftsmen* was, with 7.6%, considerably lower, but the national average of unemployment among all skilled trades would also lie much below 8.9% since unskilled labour is generally more affected by unemployment than skilled labour.

TABLE I.

Numbers and Age Structure, Building Craftsmen 1931.*

	Total in 000			*Ages as Percentages of Total, 1931*					
	Census 1931	*Insured 1931*	*Insured 1939*	*14–17*	*18–44*	*45–54*	*55–64*	*65 & over*	*Total*
Plumbers	57†	36†	43	12	64	13	8	3	100
Carpenters	127	132	153	8	62	16	9	5	100
Bricklayers	99	79	111	5	59	18	12	6	100
Plasterers	34	27	38	6	66	17	9	2	100
Masons	31	22	23	6	45	23	17	9	100
Slaters and Tilers	10	6	9	8	61	15	11	5	100
Painters & Decorators	157	111	143	6	56	18	14	6	100
Total Skilled	514	413	523	7	59	17	12	5	100
Labour to above	63	245	305	7	65	14	11	3	100
Builders' Labourers	86			3	61	18	14	4	100
General & Unskilled	193	200	102	3	63	17	13	4	100
All Other Occupations	267		120						
Total Building	1,123†	858†	1,050	6	59	18	12	5	100
All Industries	21,074			10	61	15	10	4	100

*The figures quoted are national averages. It has to be kept in mind that regional differences are of a considerable magnitude.

†The Census figures differ from those Insured because they include (1) operatives beyond the insurable age (16—64), (2) managerial staff and those working on own account, (3) operatives in the category ' General and Unskilled ', not classified as builders in the Insurance Statistics. These three categories account for roughly 75,000, 107,000 and 83,000 respectively.

The Table shows that building labour is older than the average of occupied labour. 35% of those engaged in building were over 45 compared with 29% in All Industries. The percentage of juvenile workers under 18 in the building trade lies far below the national average. The main crafts differ in their age distribution, except in the youngest group, only slightly from the semi-skilled (representing some 30% of the labour force) and from the unskilled labour which in 1939 represented only some 10% of the total.

The assumption that the age structure of 1931 is representative for the pre-war period can be tested by examining the changes taking place in the decade 1921—1931. We find that the structure remained with a few notable exceptions[2] comparatively stable. The age groups used in the above Tables accounted in 1921 for 8%, 55%, 18%, 13%, 6%
in 1931 for 7%, 59%, 17%, 12%, 5%
of all craftsmen. The respective figures for the total building labour force are :—
1921 : 7%, 55%, 20%, 13%, 5%
1931 : 6%, 59%, 18%, 12%, 5%.

Available data make it possible to see the combined influence of changes in the age structure, in building activity and in building technique on the composition of the labour force.

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[1] In the age group 14—17 they account for some 58%.

[2] Plasterers aged 18—44 increased from 54 to 66%, those above 55 decreased from 22% to 11%. Slaters and Tilers showed an increase from 50% to 61% in the 18—44 age group and a fall from 21% to 16% in the age group above 55.

TABLE II.

Percentage Changes in Number of Building Labour Between 1921 and 1931, by Age Groups and Crafts

	% + —	*14—17*	*18—44*	*45—54*	*55—64*	*65 & over*	*Total*
Plumbers	+	3	47	24	39	42	36
Carpenters	+	16	50	39	5	12	38
Bricklayers	+	20	71	34	18	16	49
Plasterers	+	54	113	70	7	—43	+75
Masons	+	64	16	33	18	12	22
Slaters and Tilers	+	60	70	23	10	0	47
Painters	+	26	30	18	35	33	28
Total Skilled	+	20	49	30	21	17	37
Labourers to above	+	7	6	—19	+10	—10	0
Builders' Labourers	—	28	+37	+7	+49	+36	+29
General & Unskilled	+	97	116	55	103	82	99
Total Building	+	20	55	31	39	30	44
All Industries	—	4	+10	+9	+25	+5	+9

Between 1921 and 1931 the number of men engaged (employed and unemployed) in the building industry had risen by 44% as compared with 9% for All Industries, but the number of building craftsmen in all age-groups except the juveniles had increased less than that of all building workers. This is largely accounted for by the great increase in General and Unskilled labour which doubled in these ten years, and, in the decisive age group 18—44, rose by 116%.[1] Plasterers of the same age group show a similar rise. The smallest change occurred with semi-skilled labour, masons and painters, particularly in the age-groups 45—54 and over 65. The above shifts between various crafts may be partly explained by new building techniques.

THE AGEING PROCESS DURING THE WAR

In this war the ageing process has been more intense than in the last war, on account of the longer duration of the war and of a more thorough mobilisation of man-power. Building labour contracted by 42% during the last war, this time it has fallen by some 58%.[2] In addition, demobilisation and demilitarisation will probably be spread over a longer period of years. At present the number of men of the calling-up age, 18—50, has, in the building industry, shrunk to about one-fifth of pre-war[6] strength so that the industry is without the bulk of the most efficient workers. Unemployed labour over 45, an age-group in peacetime responsible for 45% of all unemployed building workers although representing only 35% of total building labour, has been largely re-absorbed into the industry. Further, a high percentage of workers who before the war retired in increasing numbers from 55 on, may now stay on, for the time of emergency.

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[1] The data of 1921 and 1931 are strictly comparable both referring to the Census. Since, however, the ' General and Unskilled ' of the Census may contain men classified as Craftsmen's labourers in the Insurance Statistics the above increase may include a rise in the latter category.

[2] See Table III.

The total number of operatives insured in July 1939 plus those beyond the insurable age can be estimated at 1,130,000. This figure is very close to that of total building labour according to the Census of 1931. In the absence of better data, the age structure of 1931 with certain small corrections, may be taken as an indication of the age-composition at the outbreak of war. Changes during the war can then be estimated in the following way. Of the 1,130,000 operatives at the outbreak of war more than 500,000 recruited for the Forces[1] were drawn mainly from the 600,000 aged 18—41. With the calling-up age originally fixed at 41 transfer to other industries would have chiefly come from the age group 42—54 numbering some 275,000. Retirements and deaths would come from the age-group above 55 which accounted for some 195,000 men, but, as mentioned before, retirements were probably on a smaller scale than in peace-time. According to the last Census men aged 55—64 numbered 140,000 compared with 202,000 aged 45—54. Probably part of the 80,000[2] men who would have retired stayed on after the outbreak of war. The same applies to the 85,000 who in peace-time retired after having reached the age of 64. At the same time the inflow into the industry would largely consist of older men. We have thus the following changes :—

Call up for Armed Forces	—550,000
Net-Transfer to other industries	—145,000
Deferred Retirement	+ 35,000
	—660,000

On the basis of the assumption above and taking a present building labour force of some 470,000[3] operatives we can now compare the age structure of to-day with that of 1939 :

TABLE III.

Estimated Age-Structure of Building Operatives, 1939 and 1944.

	1939		*1944*	
	Number	%	*Number*	%
14—17	60,000	5	10,000	2
18—41	600,000	53	110,000	23
42—54	275,000	25	120,000	26
55—64	140,000	12	165,000	35
65 and over	55,000	5	65,000	14
	1,130,000	100	470,000	100

While before the outbreak of war, almost 60% of building operatives were below 41 years of age, at present 75% are above this age, and 50% are over 55.[4]

A POST-WAR COMPARISON WITH THE LAST WAR

That this war-time deterioration of the building labour force will extend beyond the armistice is suggested by a study of the effects of the last war. In the following Table the numbers of building craftsmen aged over 55 as percentages of all age-groups in each craft is given for the years 1911 and 1921.

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[1] Mr. Luke Fawcett, General Secretary of the Amalgamated Union of Building Trade Workers at the Building Congress in July 1943.

[2] These figures include those whose employment was discontinued by death.

[3] A total of some 400,000 as suggested by Mr. Fawcett, refers as it seems to those aged 16—64.

[4] Managerial staff and those working on own account not included in the above figures for operatives may account for an additional 60,000 belonging mainly to the upper age-groups.

TABLE IV.

Craftsmen over 55 as Percentages of All Ages, by Crafts, 1911 and 1921.

	1911	*1921*		*1911*	*1921*
Plumbers	8.7	10.8	Painters	13.7	18.6
Carpenters	19.4	17.8	Total Skilled	16.6	18.9
Briclayers	18.1	22.2	Labourers to above ...	12.1	12.8
Plasterers	18.0	21.9	Builders' Labourers ...	14.0	15.6
Masons	22.1	27.4	**Total Building**	16.1	18.2
Slaters	16.7	21.4	*All Industries*	12.5	13.2

While there was only a small change in All Industries, and those aged over 55 numbered 13% of the total labour force, the age structure of the building industry was more affected. This applies especially to some of the skilled trades, e.g. to masons, over 27% of which consisted of men aged over 55.

JUVENILE TRAINING

The entry of juveniles into the building industry since the outbreak of war has been almost insignificant. The accumulation of a 'normal' annual wastage, caused by death and retirement, of some 18,000 craftsmen in course of five war years corresponds to a replacement deficit of some 90,000 young and efficient craftsmen. If we allow for war-casualties, for the rate of demobilisation, and for the possibility that a certain percentage of young men will remain in the army or will not return from their present jobs into the civilian sector of the building industry, the deficit in young craftsmen may be considerably higher.

Present schooling facilities for training young craftsmen are said to allow for 4,400 annual places only. If yearly 10,000 building students[1] were to pass into the industry, 1,500 teachers and instructors would be needed instead of the 200 at present.[2] Before the war the building industry absorbed only one seventh to one half of the small supply of schooled labour passing from Junior and Senior Technical Schools. They represent some 10% of the 100,000 operatives under 21 years of age. At that time the supply by Senior Technical Schools was negligible, but positions of technical or supervisory capacity constituting some 50,000 or 5% of the total building labour force were filled mainly by upgrading. Since the knowledge of latest technical developments is essential for a lowering of building costs, provisions would soon have to be made for an increased inflow into industry of schooled men of this category estimated at 2,000 annually.[2]

The craftsmen at present working in the building trade can be estimated at 230,000.[1] If the peace-time ratio of 5 craftsmen aged over 21 years to 1 learner under 21 years of age is applied, some 45,000 new entrants could be apprenticed.

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[1] Since Building is not yet a generally recognised University Profession like Engineering, the term ' student ' as applied to apprentices attending Schools needs still clarification.

[2] For further details see Ministry of Works Report on Training for the Building Industry, and the Scheme of Apprenticeship, drafted by the Building Apprenticeship and Training Council, from which documents these figures are taken.

If the building costs are to be on a level with general purchasing power, an early extension of facilities for training building labour might prove useful, especially as the training of a building craftsman may take up to five years. At the same time it may be found that changes in building technique may permit a shortening of the traditional training period at least for certain categories of work.

The problem of obtaining young labour for the skilled building trades has been complicated by the increased use of pre-fabrication methods which may fundamentally change the traditional structure of building crafts. At present, it is hardly possible to estimate the extent to which prefabrication can or will profitably be applied and to assess how far skilled labour becomes superfluous when large parts of construction are carried out in the factory instead of on the building site.

Although progress in building technique and in trade-union standards may bring a certain change in the ratio of craftsmen to semi- and unskilled labour, at present in the neighbourhood of 1 : 1.20, it will still remain true that semi-skilled and unskilled labour is generally useless without being attached to skilled craftsmen. To arrive at the proper proportion of new craftsmen to be trained allowance would have to be made for the regional variation in the distribution and in the age of craftsmen. In 1938 the ratio of one craft to all building crafts varied, by regions, from 0.3% to 7.2% for slaters, 1.5% to 11% for masons, 3.9% to 8.2% for plumbers, 4.7% to 8.5% for plasterers, 19% to 30% for bricklayers, 19.8% to 35.4% for painters, and 26% to 35% for carpenters. The ratio of craftsmen to total building labour varied between 46% in London and 65% in Scotland.[2]

The regional differences with regard to the building programme, building techniques applied and correspondingly to the composition of craftsmen present one of the main difficulties in calculating the needs for the various branches of new recruits for building labour. Without improvement of the age structure and without regional adjustments, high costs of building labour as a result of lower efficiency and of expensive transfer-costs will remain an economic burden on the building programme. If early attention is paid to the problem the need for lower building costs may be more easily met. S. MOOS.

THE UNIMPORTANCE OF A CAPITAL LEVY

In recent discussions the imposition of a capital levy has been scouted. In the present paper an attempt will be made to clarify a certain misapprehension which has arisen mainly in consequence of the supposed implications of a policy of full employment for the problem of national debt, and to analyse the conditions in which the lack of importance of a reduction of the national debt can be taken for granted.

The latest comprehensive treatment of the problem was undertaken by Professor and Mrs. Hicks[1]; it seems convenient, therefore, to take their treatment of the problem as the starting point of this note. The arguments against a capital levy as a method of reducing the national debt can be summarised in the following points :—

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[1] =48% of 470,000, see Table III.

[2] See I. Bowen, The Building Industry in War-Time, The Economic Journal, December 1939.

(*a*) The yield of a capital levy would at present be rather meagre. This is due, first, to the fact that if a levy is not to fall heavily on the less wealthy (those possessing £10,000 capital or less), only just over half the total wealth of the country would be subject to the levy.[2] Secondly, it is due to the low rate of interest ruling on Government securities, and finally to the high taxation of incomes and high rates of death duties. The diminution of taxable capacity, and thus the yield of taxes at given tax rates, would be so substantial as a result of the levy, as to leave the Exchequer barely better off.

(*b*) The immediate repercussions of a post war levy[3] would be injurious. It would exert a deflationary pressure on the economic system that is not easy to offset. This is due to the reduction of liquid assets, of the amount of collateral available in the economic system as a result of the reduction of the national debt which represents safe assets.

(*c*) Awkward problems would arise if a levy were assessed at a given time in money terms and prices changed (especially if downward) subsequently.

This is a formidable series of objections and it is not surprising that the authors, who are concerned with the long run position in which the secular deflationary bias of individualist economic systems has re-asserted itself, and wish to infuse some 'offsetting' expansionist force through the tax system, reject a levy in favour of a recurring (annual) capital tax small enough to be paid from income and used not to repay debt but to carry its interest service.[4]

Certain considerations seem to have been overlooked in this treatment of the problem. Before we turn to them we must define the character of the economic system which is envisaged when discussing the diverse methods of dealing with the War Debt.

(*a*) We must assume that the control over capital export will be maintained indefinitely. Otherwise the taxation necessary to carry debt will further increase the threat to the stability of exchanges and/or of prices and of the structure of the rate of interest by the existence of potential purchasing power which can be offered on the exchange market.[1] The decontrol of capital export without a previous sharp capital levy would be suicidal.

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[1] J. R. Hicks, U.K. Hicks and L. Rostas, *Taxation of War Wealth*, Oxford, 1941. The relevant chapters were written by the first two co-authors. We shall not deal with the argument concerning the equity of a levy.

[2] *Cf.* Campion, *Public and Private Property in Great Britain*, p. 109.

[3] Professor Hicks's objections to a capital levy *during war* are somewhat puzzling. He seems to condemn it (pp. 194—6) because of its inflationary effects. Yet he points out that a levy is an alternative to *borrowing*. Borrowing is surely not less inflationary and leaves those awkward problems for the future which he analyses a few pages earlier (pp. 191—4) and which could be avoided by a war-time levy. It is true enough 'that a period of intense rearmament is not one in which the depressing effect of an income taxation need to cause much concern.' (p. 196), but surely it is the post-war effects, the effects 'in the longer run,' that it is most important to avoid, if one expects the return to a more liberal regime (p. 200). There is little in the objection against a war-time levy on the ground that it would not prevent inflation. No tax measure alone can prevent inflation in total war; for that comprehensive rationing is necessary. But a capital tax during the war might discourage dissaving, which a high income tax not merely does not stop but positively encourages. A stiff capital levy might increase the demand for capital as a means of securing the future.

[4] On the advantages of an annual capital tax over an income tax because of the avoidance of the deterrent effect of the latter on investment, *cf.* Kalecki. *Economic Journal 1937*.

(*b*) We must consider the position as it will exist in the medium run: everybody is agreed on the maintenance of control in the short run. The problem under discussion is whether a capital levy would be useless in speeding decontrol; those who reject it are those who also demand a speedy removal of what they term Government 'interference.'

(1) The extent of the saving in budgetary charges achieved by a capital levy has been seriously under-estimated as a result of assuming that a levy is assessed and will be paid in money (or Government securities standing at least at par). If the levy could be paid 'in kind' the annual yield to the State would be increased.

(2) The importance, if stringent direct controls as established in war-time are not to be maintained, of creating an anti-boom management fund out of that part of the levy which would be paid in kind has not been taken into account.

(3) The existence of a national debt whose real value has vastly increased owing to its expansion coupled with the successful direct control of prices etc. during the war must exert an unsettling influence in a 'more liberal (decontrolled) system' to which most opponents of a levy seem to wish to return quickly, i.e. within a few years after the armistice. This unsettling influence is not in a deflationary but in an inflationary direction. It is not so much due to its current burden which, as Mr. Kalecki has shown, can easily be overcome. It is the consequence of the enormous increase in the money assets of the community which does not correspond with any increase in real incomes. This reduces the efficacy of 'global' controls held to be 'legitimate' by those who oppose direct 'Government interference.' Let us take these points in turn.

(*i*) A levy which could be paid either in money or in kind valued by the taxpayer and at the option of the Inland Revenue has two advantages. It enables the establishment of an anti-boom management fund, the assets ceded to be held by the National Debt Commissioners. It would, secondly, very much reduce the difficulty of valuation. If the taxpayer is left to value his capital but the State retains the right of either accepting it in money or taking it in kind, and of taking any part of the capital in kind or in money to pay off the total liability, this ensures automatically an honest valuation of each of the capital items. The taxpayer would have to bear the risk of losing by both under-and over-valuation. As long as the Debt Commissioners hold these assets they would receive an income in respect of their holdings higher than the rate of interest payable on the Government debt, which income could be used to carry a part of the debt interest. Thus the budget would no longer be concerned with that part of the debt interest, and taxation could either be reduced or its yield used for other purposes. The Debt Commissioners, by holding assets the yield of which is higher than the rate of interest, can carry a larger part of the debt burden than they could repay by realising assets immediately.

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[1] Already Ricardo had perceived this aspect of the problem, *cf.* 'On the System of Funding.'

The net gain to the Debt Commissioners arises from two facts: (1) By holding a mixture of assets, the objective risk of holding the assets is very much smaller than that of the taxpayer who holds specific investments. The difference between the actual yield and the smaller risk carried by the Debt Commissioners would represent a net gain achieved by pooling assets. (2) An 'objective' gain arises from the fact that the taxpayer, for fear of a possible emergency sale, must value 'illiquid' assets at a higher yield than the State which has (apart from boom-control) no need ever to sell such assets and can disregard this aspect of the nature of assets.

Moreover, the State would thus be directly interested in maintaining conditions in which the income from these assets remains stable or is increasing,—an important consideration in a 'more liberal' economic system in which most, if not all, Government Departments are interested in reducing State expenditure, or at most in regulating economic activity negatively.

(*ii*) It seems to be generally assumed that a (non-controlled) post-war economic system will (after the transition period) be confronted solely with the problem of deflation. In a non-controlled system it is admittedly easier to stop booms than to overcome depressions. But it seems certainly true that in the absence of direct controls it is very difficult to stop booms in such a way as not to cause depressions. The existence of a fund consisting of miscellaneous assets would go some way towards making 'global' controls more subtle and thus more efficacious. Not only would the existence of the fund in itself discourage unsettling speculative activity, but the fund could effectively intervene in the diverse markets for the different kinds of capital assets if speculation did nevertheless threaten. If, therefore, an eventual decontrol is envisaged in the longer run, a capital levy is to be recommended.

(*iii*) Much the most important function, however would be fulfilled by a Capial Levy in the transitional period. In this period the existence of a large National Debt (in real terms) would render the maintenance of the stability of the economic system without direct controls difficult. The slower the flow of supplies, relative to the potential demand arising from the Debt, the longer the 'transition' period in which (modified) war-time controls have to be retained. The deflationary effects of a capital levy which were used by Professor Hicks as an argument for rejecting it, are surely grounds for supporting it—if, as he wishes, a return to a 'more liberal' system is one of the aims of economic policy.

The increase in the National Debt during war, when direct controls have prevented its depreciation in real terms, has violently changed the distribution of total national capital between different kinds of assets as well as the relationship between total assets and income. Unless potential consumers and entrepreneurs are willing voluntarily to postpone consumption and investment, the present structure of the rates of interest could hardly be maintained in a decontrolled economy during the transition without inflation. The possessors of Government debt could always sell their assets and increase their consumption or undertake investment without direct resourse to the banking system and unless the Government consented to an increase in the rate of interest, they could thus obtain cash. ' Global ' or monetary methods of control lose their efficacy if the ' collateral ' position, the real value of assets held by the public has risen out of proportion to the increase of real income ; i.e. in a situation of pent-up demand.

As an alternative to a capital levy an increase in income-tax might be envisaged, but this would have a more unsettling influence on the re-equipment of industry, which is necessary not merely for international economic reasons, but also because of the need to increase real income as speedily as possible.[1]

As Professor Hicks has shown,[2] after each increase of the National Debt due to war there was a tendency, in an uncontrolled system, where banking policy had to be managed so as to prevent the foreign balance from getting out of hand, for the long term rate of interest to increase. If the Government decides to manage the economic system with a view to stabilising the rates of interest, then they must resort to other methods of control to prevent an inflation and a capital levy would be a suitable instrument.

Without trying to evaluate the possibility of whether in a de-controlled economic system stability could be maintained, even in favourable circumstances, it seems evident that, in conditions such as are likely to rule in post-war Britain for a considerable time, a sharp inflation could only be avoided without direct control if a capital levy were instituted. Even then controls would have to be maintained though for a shorter time. When potential output at current prices has risen relative to to the National Debt the danger of an inflationary explosion will vanish.

Those who wish for the rapid abolition of war-time controls must at the same time advocate a drastic capital levy. It is to be hoped, however, that the existence of an increased National Debt will ensure, because of the unpopularity of a capital levy, the maintenance of the most important of those direct controls which have been forced on the Government as a result of the war, as these controls would, even in the absence of a much increased National Debt, seem necessary for the maintenance of a full employment policy. Under these conditions the existence of the Debt far from being a hindrance will, especially if its burden is properly financed, help in maintaining private investment activity and ease the problem of maintaining full employment.

T. Balogh.

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[1] Mr. Kaldor 'The Current Burden of Capital Taxes,' (*Review of Economic Studies*, 1940, p. 291) rightly points out that the annual burden of capital taxes is higher than the decrease in available income to the owners, because of the loss of security and of the option to increase consumption implied in the loss of the capital sum. But unless direct controls are maintained and thus this potential purchasing power is prevented from having a disruptive effect on the economic system, it is exactly the reduction of the volume of purchasing power which is imperative.

[2] Manchester School 1939, p. 27.